VIRTUAL TRAINER SOFTWARE

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FIELD OF THE INVENTION

[0001] The invention is related to on-line interactive computer based work-out training. In particular, the invention offers on-line workout training for users with particular emphasis on how to use gym equipment. The invention provides online virtual personal training to a user with the help of a choice of virtual trainers, based on user's needs and skill level .

BACKGROUND OF THE INVENTION

[0002] Training is an integral part of any good workout program. Most individuals (users) that have used a gym are familiar with some of the gymequipment. However, there are times when individuals need to enlist the professional help of a personal trainer to familiarize themselves with the various gym equipment, the proper way of using the gym equipment and to recommend good workout programs to suit their needs and skill levels. Equipment instruction videos are available to demonstrate general principles on how to use specific equipment but do not provide any other flexibility. Also, each video targets specific areas of workout but do not give a detailed workout routine for all the equipment available in a standard gym.

[0003] Various other internet-based exercise applications are in use. One such system is proposed in U.S. Patent No. 6,468,086 wherein the screen is partitioned into at least 2 partitions, displaying an exercise movement within each of the partition for a select period of time. When the time expires a new exercise movement is displayed. The exercise movement targets a specific muscle group each time. This system does not provide the flexibility of choosing the trainer to workout with. In addition, it does not provide the ability to track the individual's progress over a period of time.

[0004] Part of the reason an individual uses a personal trainer is for motivation and the trainer's knowledge in the field of physical fitness. While previous video exercise programs provide the details of how to use exercise equipment, it does not go far enough to let the individual choose the trainer and personalize their exercise routine. Personalizing their exercise routine provides them with the proper motivation to stick to their routines.

[0005] Another area of concern is the lack of availability of personal trainers at any time of day. Most experts agree that live training by skilled instructors is the most effective approach, but this is often impractical, especially when an individual is traveling or when an individual wants to work-out at a time of their choosing . Often times people with a very busy schedule trying to balance their busy life style with the various demands placed on their time, do not have the time to go to a gym during gym hours when personal trainers are available. Even if they have the time, they need to plan ahead and schedule an appointment with the trainer to ensure the personal trainer's

availability. Moreover, when the individual has to travel unexpectedly he/she will not be able to keep his/her appointments and will have to re-schedule .

[0006] One-size-fits-all training programs, such as exercise videos, may not be effective to all individuals and might deter more than help. Furthermore, some might prefer to have the same human personal trainer through out the training session instead of having different trainers for different sessions.

[0007] Accordingly, there is a need for a virtual personal individualized training to

    a) motivate the individual to stick to an exercise regimen;

    b) provide an inspiration for the individual to stay on the regimen;

    c) guide the individual in the proper and safe use of the equipment and proper exercise regimen to follow for maximum benefit;

    d) keep the individual on track to achieve the individual's desired result;

    e) provide other guidance such as proper nutrition to follow ; and

    f) follow up to figure out if additional routines need to be introduced to help the individual achieve his/her physical goal.

[0008] The computer-based training allows for immediate, inexpensive access to training from any locale and at any time. A readily accessible personalized training routine within reach also solves the problem of having to miss out on the individual's exercise routines while on a trip (business or personal). Computer based training

provides a customized workout schedule for the individual to follow at his/her own pace. The virtual trainer provides the one-on-one training that an individual looks for in a gym but gives the individual a choice of where and when to get such training and is also a great substitute to having a human personal trainer. Online training for using newer equipment can be easily made available to the individual/user through a web site without having to buy a new video or new software. Use and comprehension of the training content can be centrally monitored in real time and charted or reported as needed.

SUMMARY OF THE INVENTION

[0009] Accordingly, it is an object of the invention to provide a means for dynamically generated training content to give each individual/user a trainer-specific and equipment-specific workout experience.

[0010] It is another object of the invention to provide a dynamic choice of picking any trainer and any workout option to follow.

[0011] It is another object of the invention to provide the choice of switching trainers or workouts depending on the interest of the user.

[0012] It is another object of the invention to enable the trainers to share their own expertise and knowledge with the users simulating the live experience at the gym.

[0013] It is another object of the invention to provide an on-demand, portable solution to the exercise routines.

[0014] It is another object of the invention to provide cost-effective training options as and when newer equipment is introduced.

[0015] The current invention offers detailed instruction to a user of how to use typical gym equipment without having to invest in a personal trainer or physically be at the gym. The Virtual Trainer application is installed on any standard computer and accessed by a hand-held device or on a computer connected to a network and accessed from any standard computer or hand-held device connected to the same network. With the advent of various palm devices and easy access to the network the application is easily accessible from anywhere using a computer or palm device without any additional hardware requirements. The Virtual Trainer application gives the user an option to choose a specific trainer to work out with and a specific exercise result to follow, all in the convenience of the handheld device or a computer. The application also provides the user with the ability to choose from a list or from a human anatomy display and provides a list of exercise results to be achieved from various exercise equipment. The application could be accessed on a regular basis even in a gym during any regular workout as a good substitute to a human personal trainer. The choice of trainers and exercise results give the user the flexibility and variety for an interesting and motivating workout.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] Figure 1 is a block diagram illustrating a stand-alone computer system with the application loaded. It also depicts the various computing systems that can access the application from this stand-alone computer system.

[0017] Figure 1a is a block diagram illustrating a storage device with the application like a Compact Disc or flash memory card or plug-in that is plugged into the stand-alone computer system or various computing devices. The user is able to access the application from the plug-in without actually loading it onto the computer or computing device.

[0018] Figure 2 is a block diagram illustrating a computer system with access to the Internet on which the application is loaded.

[0019] Figure 3 is a flowchart illustrating the steps used by either a user to download the Virtual Trainer application on a stand-alone computer system or by an administrator to download the application on a server for access by users.

[0020] Figure 4 is a flowchart illustrating the steps taken by a user to select the trainer, the exercise result and exercise sub-routines for workout and to enter his/her progress on the tracking log.

[0021] Figure 5 is a block diagram of the options available to a user when they access the Virtual Trainer application.

[0022] Figures 6 and 7 are block diagrams of the options available to a user when he/she chooses one of the exercise results and the trainer he/she wants to workout with.

DETAILED DESCRIPTION OF THE INVENTION

[0023] The present invention is an interactive training application comprising a training database **11** wherein the training database **11** provides information related to workout training. The information in the training database **11** comprises information on a plurality of trainers and a plurality of exercise routines to work various areas of interest in the human body to obtain a desired result a user wants. The areas of interest refer to the various muscle groups of the human body that can be exercised. The information in the training database **11** also comprises information on a plurality of gym equipment and graphic demonstration of how to use each of the gym equipment with details on which muscle groups are being worked and what equipment to use to obtain the desired result. The information on trainers includes their biography, their credentials and their area of specialization as related to the training.

[0024] In general, the present invention is an interactive training method and system to help users workout physically to achieve the desired body results. It provides the motivation and encouragement to users by introducing them to proper workout routines, suggesting the correct exercise routines to perform, the sequence of these exercise routines to follow and provide variety by allowing them to choose the routines

or the trainer dynamically. A preferred embodiment is explained in greater detail in the following paragraphs but is illustrative and is not intended to be limiting the invention in any way.

[0025] A user and individual are used interchangeably in this application. A user is an individual using the application or doing the workout as referenced in this application. The trainer as used in the following paragraphs is a virtual trainer who demonstrates the exercise routines to follow to achieve a specific result to a user.

[0026] In one of the embodiments, the method uses a stand-alone computer 10 such as a lap-top computer, a desktop, a workstation or the like, to install the database 11. The user then accesses the database 11 to pick the trainer and exercise routine to follow and updates the database 11 with the necessary information in the tracking log. The database from the stand-alone computer 10 can also be down-loaded to a Personal Digital Assistant 22 or other hand-held device 23 with a built-in monitor/screen or having the capability of connecting to a video monitor or video screen. Figure 1 illustrates a system for implementing the invention. In another embodiment of the invention, the application is on a storage device such as a compact disc, a Flash memory module or the like, that can be carried around. The user can then plug-in the storage device such as the compact disc (CD) into the appropriate slot such as a CD player on the computer/computing device or the flash memory module into the appropriate slot of the computer or computing device, to access the database 11. Figure 1a illustrates one such system for implementing the invention. The system of Figure 1 and Figure 1a

allows the users to access the database **11** using the input/output device of a normal computer such as a keyboard and a video monitor/touch screen monitor or from a Cell Phone **21**, Personal Digital Assistant (PDA) **22** or other hand-held devices **23** with sufficient memory using the keypads/keyboards/number pad and video screens/display screens. The updates from users are performed asynchronously relative to the users' inquiry and input so that the information on the training database **11** is always current.

[0027] In another embodiment of the invention, the method uses a web server **10a**, consisting of a database **11** and a web application **12**. Multiple users connect to the web site on the web server **10a** through the Internet **20** to access the database **11**. The data is stored in the database **11** using the database engine.

[0028] Figure 2 illustrates a system for implementing the invention over the Internet **20**. The system of Figure 2 connects a plurality of users to a Web server **10a** through the Internet **20**. The web server **10a** is connected to the Internet **20** through Wide Area Network (WAN) by any one of the following means: T1 line, DSL (Digital Subscriber Line), Cable Modem and phone modems. The Web server **10a** enables hosting the web site and running the web application. The users access the database **11** through any device capable of accessing the database **11** over the Internet **20**. The device may be a Desktop Computer **10**, a Workstation **32**, Interactive Television **33**, Laptop computer **34**, Cell Phone **21**, Personal Digital Assistant **22**, or any other hand-held devices **23** which allows a user to access and update information on the database **11**. The Web server **10a**

maybe a multiple server computer configured to appear as a single resource. A database 11 created through the database engine holds data on the trainers, exercise routines and exercise results to be achieved. A Web application 12 is part of the Web server 10a. The Web server 10a could be any commercially available web server, such as Microsoft's Internet Information Services (IIS) or Apache. The web application 12 facilitates the user interface to the training database 11 using an Internet 20 or Web browser. The database 11 receives query and update requests on progress made from web application 12, initiated by users. The updates are performed asynchronously relative to the users' inquiry and input so that the information on the database 11 is always current. The access to the Internet could be by a wireless connection or by a wired connection. The wireless connection could use the blue-tooth technology or any other technology that allows graphical transfer of data or access the database 11 on the computer 10 by computing devices (10, 21, 22, 23, 32, 33, 34).

[0029] Figure 3 illustrates the steps taken by a user (for a stand-alone computer / computing device) or an administrator of a server based computer to install the database 11 and access it. The user/an administrator of a server accesses the computer or computing device and installs the database 11. The installed database 11 includes both the graphical aspect and instructional aspect of the exercise routines and the screens associated with the various choices. The user then accesses the database 11 by navigating through the screens.

[0030] Figure 4 illustrates the flow chart of the various steps taken by the user to access the various options on the database **11**. The user accesses the database **11** from a stand-alone computer **10** or from a network computer **10a** connected by the Internet **20**. When a user accesses the database **11**, the Virtual Trainer Opening Page appears as illustrated in Figure 5. This screen is interactive and displays the various options available to the user as user interface mechanisms to receive user responses, placed in a convenient location on the screen. Options that are currently available to the user appear as buttons in this embodiment and are, for example: "Intro and Tutorial", "Meet the Trainers" (a drop-down menu), "Choose your Workout" (drop-down Menu), "Anatomy of human body", "Consult with your Nutritionist" and "Track your Progress". The user is also assisted with rollover text messages when the cursor is rolled over each of the option buttons.

[0031] When the user selects the "Intro and Tutorial" (explanation of Virtual Trainer (V.T.)) button, the user is provided with a brief introduction and is walked through a graphical demonstration and tutorial describing how to navigate through the application including the various options available to the user.

[0032] "Meet the Trainers" option is a drop-down menu where the user is allowed to pick from a group of trainers. When the user picks a specific trainer, he/she is presented with a video image of the chosen trainer along with the biography of the trainer, trainer's credentials and area of specialization related to the training. The user is allowed to switch between various trainers anytime during the exercise session by

choosing the "Meet the Trainers" button displayed on different screens. The user then proceeds to choose the exercise result they want to get out of the workout by going to the "Choose your Workout" option.

[0033] The "Choose your Workout" (drop-down menu) option allows the user to pick a specific exercise result that the user wants to achieve for that session. The exercise results are grouped according to specific physical human body results obtainable from the exercise workout, such as Toning & Firming, Strength & Size, Cardio, etc. When the user chooses a specific body result, he/she is presented with a plurality of skill levels to choose from for that session. The skill level represents the level at which the user would be comfortable to begin his/her workout such as, for example: Beginner, Intermediate, Advanced, Expert, etc. Once the user chooses the skill level that they want to train under, the user can then use either the "Meet the trainer" option to select the trainer they want to work out with if the trainer has not been previously selected or proceed to choose the area of interest from a list of areas of interest presented under the specific body result for the chosen skill level. Once the user chooses the area of interest, the instruction phase of the training begins.

[0034] The "Anatomy of Human Body" option provides the user with a graphical display of the human anatomy. The user is allowed to choose any of the body parts that represent the different areas of interest that he/she wants to exercise by clicking on it. The rollover text helps the user to identify the various areas of interest that he/she wants to exercise. When the user chooses a particular body part, he/she is presented

with a list of exercise results that he/she can pursue on the chosen body part. When the user chooses a specific exercise result, the user is presented with an interactive screen with a list of skill levels to choose from. After the skill level has been chosen, the user can then proceed to the "Meet the Trainers" option to choose a trainer to present the instruction phase of the training if the trainer has not been previously chosen or proceed to choose an area of interest from an interactive screen.

[0035] The "Consult with your Nutritionist" option provides an interactive screen that is used to plan the user's diet that can be followed by the user along with the exercise routine to achieve the desired result.

[0036] The "Track your Progress" option provides the user with a Tracking log where the user is presented with an interactive screen to enter data related to the workout and an option to view and print a log of the progress made during a period of time. The data is entered using any input device connected to the computer or computing device such as, for example, a key board, key pad, a number pad or the like.

[0037] When the user picks a specific exercise result, the user is presented with an interactive screen as shown in Figures 6 and 7. The screen presents the option to choose a skill level and the various areas of interest that are available to achieve the specific exercise result. The areas of interest represent the muscle groups of the body that can be exercised by the user. For example: If the user chooses Tone and Firm as his/her exercise result, he/she is presented with a screen as shown in Figure 6. If the user chooses Strength and Size as his/her exercise result, the user is presented with a screen

as shown in Figure 7. Some of the areas of interest are: 30 Minute Full Body, 1 Hour Full Body, Chest and Back, Biceps and Triceps, Legs, Abdomen (Abs). Other options can be made available as will be evident to someone skilled in the art.

[0038] When the user chooses a particular skill level and an area of interest from the above list, the Virtual Trainer software creates a logical sequence of exercise routines using various exercise equipment to achieve the desired result. During the instruction phase of the training, the sequence of exercise routines so created for the selected exercise equipment is presented to the user by the chosen trainer on the screen. The presentation can include, for example, a detailed description of the function of the gym equipment to be used for that specific exercise routine, a detailed instruction on how to operate each of the gym equipment, a detailed description of specific muscle groups involved and exercised when using each of the gym equipment, the logical order of training the specific muscle groups on the various gym equipment, all of these instructions delivered by the selected trainer. The user then follows the instructions and proceeds to do the workout. This workout represents the workout phase of the training.

[0039] The user is also provided with navigational links during the workout. The navigational links are provided as user interface mechanisms to receive user responses, placed in a convenient location on the screen that displays the various areas of interest. Some of the navigational links that are available are presented as buttons in this

embodiment and include, for example: "Alternate Exercise", "Popular Questions", "Music", "Back", "Home", "Track your progress".

[0040] The user could choose the "Alternate Exercise" link in situations where the specific gym equipment that the trainer is demonstrating is not available and the user needs to find alternative ways to exercise the desired area of interest or when the user wants to see an alternate exercise on the same gym equipment.

[0041] The "Track your Progress" link provides the user with a Tracking log where the user is presented with an interactive screen for inputting data and tracking his/her progress over a period of time. Tracking the progress can, for example, be in the form of a progress report or a progress chart. The Tracking log also provides an option to view and print a log on the progress made.

[0042] When the "Popular Questions" link is chosen, the user is presented with a screen listing the frequently asked questions with answers. The questions and answers are related to various gym equipment and exercise routines.

[0043] When the user chooses the "Music" link, the user is allowed to toggle to the user's MP3 interface so that the user could listen to music when doing the workout phase of the training. The workout phase would be the time after the user has gone through the training phase (demonstration) under the selected trainer for that particular exercise routine and is ready to workout on his/her own. When the user is ready to

train on another area of interest or another result the music could be paused and resumed after the instruction phase of the chosen result or area of interest is completed.

[0044] Additional options under exercise routines can also be added. Some of the options that could be added, for example, are: Cultural training such as Yoga, Pilates, Kung Fu and other martial arts, Home workout, Vacation workout, Marathon training, customized training such as training with a celebrity, etc.

[0045] While the present invention was described with respect to particular embodiments, other embodiments, uses and advantages of the present invention will be apparent to those skilled in the art. The specifications and examples should be considered exemplary only. The intended scope of the invention is only limited by the claims appended hereto.